REMARKS

Claims 11-16 remain in connection with the present application, with claim 11 being the sole remaining independent claim.

Prior Art Rejections

Claims 11 and 13-15 have been rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,084,352 to Seki et al. (the Seki et al. '352 patent) in view of U.S. Patent No. 6,294,870 to Kawashima et al. (the Kawashima et al. '870 patent). This rejection is respectfully traversed.

New Grounds of Rejection

Initially, with regard to claim 11 of the present application, this claim was previously rejected over the Kawashima et al. '870 patent in view of the Seki et al. '352 patent and further in view of U.S. Patent No. 5,996,250 to Shimizu (the Shimizu '250 patent). Thus, as the Examiner has now made the Seki et al. '352 patent the primary reference, and has dropped the Shimizu '250 patent from the previous prior art rejection, the Examiner has issued a New Grounds of Rejection which was not necessitated by Applicants' Amendment. As such, the present Office Action was improperly made final. Accordingly, withdrawal of the finality of the present Office Action is respectfully requested.

Arguments Over the Alleged Combination of the Seki et al. '352 Patent and the Kawashima et al. '870 Patent

In the Office Action, the Examiner asserts that the Seki et al. '352 patent teaches, in column 1, lines 43-45, sealing portions which are extremely lengthened so as to locate molybdenum foils at the end of sealing portions away from a light-emitting portion and intrinsic or inherent temperature focus regions along the tube axis (see second full paragraph of page

three of the Office Action). In other words, the Examiner is attempting to assert that the Seki et al. '352 patent teaches or suggests a connection portion, wherein an external lead and a metal foil are connected, provided in a position outside a temperature focus region. However, there is no temperature focus region discussed in the Seki et al. '352 patent. As discussed in column 1, lines 19-24, the Seki et al. '352 patent refers to problems in conventional lamps wherein, when the lamp is burning, "the temperature of the molybdenum foil is raised abruptly by radiation heat from the lamp, conduction heat transferred through the sealing portion, heat generation due to the resistance of the molybdenum foil itself by the passage of current, and the like" occurs; and as such, as stated in lines 43-45 of column 1, sealing portions are extremely lengthened so as to locate the molybdenum foils of the end of the sealing portions away from the light-emitting portion.

The aforementioned paragraphs of column 1 of the Seki et al. '352 patent refer to situations where, since the bulb of the lamp has the highest temperature, the temperature of the sealing portion decreases as it is positioned further away from the bulb. Thus, the end of the sealing portion is positioned away from the bulb such that the temperature is decreased enough not to oxidize the molybdenum foil provided within the sealing portion. As such, the sealing portions are extremely lengthened. This has nothing to do with a temperature focus region as claimed.

Comparing the teachings of the Seki et al. '352 patent with that of the present invention, Applicants respectfully submit that the Seki et al. '352 patent fails to teach or suggest at least a "temperature focus region" as claimed in claim 11. As claimed in claim 11, the temperature focus region is described as a region "in which a temperature is a maximum and which occurs because of light incident to the reflecting mirror from the optical system disposed forward in

emission direction and irradiating the sealing portion" (emphasis added). Thus, according the present application, the temperature focus region is a region which has a highest temperature generated by emitting light, which is reflected from the optical system provided in front of or forward of the emitting direction of the reflecting mirror, to the sealing portion through the reflecting mirror.

The Seki et al. '352 patent fails to disclose any such reflecting mirror and optical system provided forward or in front of the emitting direction of the reflecting mirror. In other words, the lamp of the Seki et al. '352 patent does not include any temperature focus region as claimed in claim 11 of the present application. The Seki et al. '352 patent merely discloses a radiation heat from the lamp, a conduction heat transfer through the sealing portion, and heat generation due to the resistance of the molybdenum foil itself by the passage of electric current, as heat that increases of the temperature of the molybdenum foil. However, it fails to teach or suggest any claimed "temperature focus region" which deals in any way with heat generated by light reflected from an optical system.

Accordingly, even assuming *arguendo* that the Seki et al. '352 patent could be combined with the Kawashima et al. '870 patent, which Applicants do not admit, the alleged combination would still fail to teach or suggest at least the temperature focus region as claimed and clearly set forth in claim 11 of the present application. Accordingly, withdrawal of the outstanding rejection and allowance claims 11-16 in connection with the present application is earnestly solicited.

Further, the Examiner admits that the Seki et al. '352 patent does not teach the use of any type of reflecting mirror and the use of the lamp as a light source in an optical system. Thus, for

at least such additional reasons, the Seki et al. '352 patent cannot include a temperature focus region.

The Examiner does attempt to in some way combine the teachings of Seki et al. '352 patent with those the Kawashima et al. '870 patent by stating that it is well known for various devices, like optical systems, to integrate a discharge lamp with a reflecting mirror to prevent or minimize the scattering of glass in case of breakage and to facilitate the maintenance of the lamp, citing column 4, lines 9-30 of the Kawashima et al. '870 patent. Even if this were true, which Applicants do not admit, the Kawashima et al. '870 patent also fails to teach or suggest a temperature focus region as claimed.

As discussed in the previous Amendment, and as discussed on page 7, lines 11-26 of the present application for example, it is Applicants who have discovered that when light reflected from an optical system, is reflected by a reflective mirror and irradiated on a sealing portion, a temperature focus region is formed in the sealing portion in which temperature is a maximum. Applicants' discovery of this problem then resulted in the discovery of Applicants' solution as is also claimed. Even if the references could be combined as suggested by the Examiner, both the problem and the solution would not have been recognized. Thus, claim 11 is clearly unobvious over the alleged referenced combination.

This discovery of the problem and the solution itself is not in any way made obvious by the teachings of the Kawashima et al. '870 patent nor the Seki et al. '352 patent. Neither reference recognized this problem. Thus, even assuming *arguendo* that they could be combined (which Applicants do not admit), claim 11 remains patentable over the alleged referenced combination. As stated previously, a patentable invention may lie in the discovery of the source of a problem even though a remedy may be obvious once the source of the problem is identified,

as stated in *In re Sponnoble, 56 CCPA 823, 232-33, 160 USPQ 237, 243 (CCPA 1969).* Applicants respectfully submit that the discovery of the source of the problem makes claim 11 patentable, as well as Applicants' proposed solution to the problem. Neither can be found in the prior art, including the Seki et al. '352 and the Kawashima et al. '870 patents, even assuming *arguendo* that they could be combined.

Finally, Applicants respectfully submit that the Examiner does not provide proper motivation for combining the teachings of the Kawashima et al. '870 patent with those of the Seki et al. '352 patent. Absent such motivation, a *prima facie* case of obviousness cannot be established. See *In re Dembiczak, 50 USPQ 2d 1614 (Fed. Cir. 1999),* wherein it states that the prior art must provide some motivation, suggestion or teaching of the desirability of making this specific combination and wherein it states that the Examiner must provide particular findings as to why the pieces of prior art are combinable, wherein broad conclusory statements standing alone are not "evidence." The Examiner has not provided any such particular findings and thus has not provided adequate motivation for combining the teachings of the Seki et al. '352 patent and the Kawashima et al. '870 patent. Therefore, Applicants respectfully submit that the rejection should be withdrawn and that claims 11-16 should be allowed.

The Examiner has further rejected claim 12 under 35 U.S.C. §103 as being unpatentable over the Seki et al. '352 patent in view of the Kawashima et al. '870 patent, and further in view of the Shimizu '250 patent. Applicants respectfully submit that claim 12 is patentable for at least the reasons previously presented regarding independent claim 11, and further submit that even assuming *arguendo* that the Shimizu '250 patent could be combined with either one or both of the aforementioned patents, which Applicants do not admit, the Shimizu '250 patent would fail to make up for at least the previously mentioned deficiencies of the aforementioned references with

regard to independent claim 11. Accordingly, for at least such reasons, Applicants respectfully submit that dependent claim 12 is allowable over the prior art of record.

Finally, the Examiner has rejected claims 11 and 16 under 35 U.S.C. §103 as being unpatentable over the Kawashima et al. '870 patent in view of the Seki et al. '352 patent. This rejection is respectfully traversed for at least the reasons previously set forth regarding the alleged combination of the Seki et al. '352 patent and the Kawashima et al. '870 patent. Further, as the Examiner has clearly set forth this rejection, in addition to the rejection over the referenced combination in the reverse order, the Examiner has clearly and admittedly set forth a New Grounds of Rejection in connection with the present application. Accordingly, withdrawal of this rejection and allowance of each of claims 11-16 in connection with the present application is earnestly solicited.

Entry of Amendment After-Final is Proper

Applicants respectfully submit that since the present Reply does not include any substantive amendments to the claims (the only amendment being one to correct a word processing error in claim 11), the present Reply does not raise any new issues which would require further consideration and/or search. Accordingly, entry of the present Reply under 37 C.F.R. §1.116 is believed to be proper and as thus, is respectfully requested.

CONCLUSION

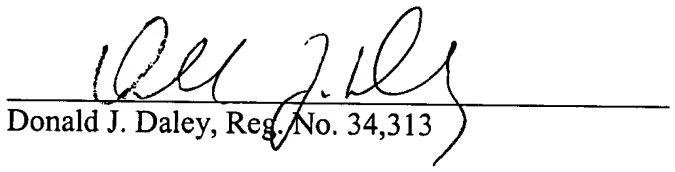
Accordingly, in view of the above amendments and remarks, reconsideration of all outstanding objections and rejections and allowance of each of claims 11-16 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By 
Donald J. Daley, Reg. No. 34,313

DJD/hnd

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000